

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 April 2005 (21.04.2005)

PCT

(10) International Publication Number
WO 2005/034733 A3

(51) International Patent Classification⁷: **C07H 21/04**,
C12N 15/00, C07K 16/00, 14/00, A61K 39/395, 38/00

(21) International Application Number:
PCT/US2004/033176

(22) International Filing Date: 8 October 2004 (08.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/509,473 8 October 2003 (08.10.2003) US

(71) Applicant (for all designated States except US): **NORTH SHORE-LONG ISLAND JEWISH RESEARCH INSTITUTE** [US/US]; 350 Community Drive, Manhasset, NY 11030 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MESSMER, Bradley, T.** [US/US]; 238 Waukena Avenue, Oceanside, NY 11572 (US). **CHIORAZZI, Nicholas** [IT/US]; 18 Bliss Avenue, Tenafly, NJ 07670 (US). **ALBESIANO, Emilia** [IT/US]; 160 South Middle Neck Road, #3L, Great Neck, NY 11021 (US).

(74) Agents: **ARNOLD, Craig, J. et al.**; Amster, Rothstein & Ebenstein LLP, 90 Park Avenue, New York, NY 10016 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
9 September 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **METHODS AND COMPOSITIONS FOR DIAGNOSIS AND TREATMENT OF B CELL CHRONIC LYMPHOCYTIC LEUKEMIA**

(57) Abstract: Provided are isolated and purified preparations of a combination of a light chain antibody gene and a heavy chain antibody gene, where the light chain and heavy chain antibody genes are the same among more than one patient with B cell chronic lymphocytic leukemia (B-CLL). Vectors comprising those genes and cells comprising those vectors are also provided, as are isolated and purified antibodies encoded by the antibody genes. Anti-idiotypic antibodies, peptides, and aptamers that bind to the antigen-binding region of an antibody encoded by the antibody genes are additionally provided, as are multimeric molecules comprising multiple binding sites that bind to the antigen-binding region of an antibody encoded by the antibody genes. Methods of determining whether a patient with B cell chronic lymphocytic leukemia (B-CLL) has a form of B-CLL that is susceptible to treatment directed to eliminating idiotype specific B cell receptor-bearing B-CLL cells are also provided, as are methods of following the progression of treatment of B-CLL in the patient. Additionally, methods of treating a patient having B-CLL are provided, as are methods of identifying a therapeutic agent for B-CLL.

WO 2005/034733 A3